



Missouri Department of Natural Resources

SECTION 303(d) WATERS

STATE OF MISSOURI

September 23, 1998

The following waters were adopted by the Missouri Clean Water Commission as the 1998 list of waters designated under section 303(d) of the federal Clean Water Act. The federal Water Pollution Control Act, section 303(d), requires that each state identify those waters for which existing required pollution controls are not stringent enough to implement state water quality standards. For these waters, states are required to establish total maximum daily loads (TMDLs) according to a priority ranking. The waters listed below are not expected to attain water quality standards through the implementation of any currently required pollution control technology.

The Commission accepted the Department of Natural Resources recommendations for changes to the list from the August 11, 1998 public notice and in addition included three waters previously suggested by public comment. The four recommended changes to the list were the following: 1) deletion of Bear Creek (Boone County Sewer District; Jerry Morris Subdivision lagoon has been closed); 2) change of the distance impaired on Long Creek to read 0.2 miles; 3) change of the James River entry by adding waterbody identification number 2347 and changing miles affected to 59; and 4) removal of the Higginsville North Lake from Category One list (this lake is no longer a drinking water lake). In addition the double listing of Wyaconda Lake was eliminated (the lake remains listed in category two). The Commission added Cave Spring Branch in McDonald County, and the Mississippi and Missouri Rivers.

The list includes three categories of waters and each category will be managed differently, as described. Category One waters are proposed for full TMDL development as indicated in the schedule. These waters and schedules are similar to the proposal that has been public noticed earlier. Some of the waters listed for BOD and NFR contaminants may be remedied through the establishment of conventional wastewater treatment technology at the noted sources, or the normal processes of inspection, permitting and enforcement; if these remedies are not successful in attaining water quality standards, additional work based on TMDL development would then proceed. Four of these facilities are in enforcement and two are referred to the Attorney General's Office. Category Two waters are a subset of the waters that are reported as impaired in the 305(b) report (Missouri Water Quality Report), but for which the data is older or of lesser quality than those waters contained in List One. These waters include those that are impaired from sediment from runoff or channelization, organic enrichment from wastewater or other contaminants. These waters are scheduled for further monitoring; if the additional monitoring confirms the impaired condition, full TMDL development would proceed. Category Three waters are presently recognized as impaired, but unlike Category One, there is no practicable remedy for these waters. These waters are impaired by naturally occurring constituents or sediment contaminated with low levels of chlordane, which results in a fish consumption advisory. Additional actions on these waters will consist of use attainability analyses to examine the naturally occurring contaminants (such as manganese concentrations) or TMDLs that address conditions that are very difficult to remediate (such as widespread sediment contamination with chlordane).

CATEGORY 1
RECOMMENDED SECTION 303(d) WATERS REQUIRED TO HAVE TMDLS

Water	County	Miles/Acres Affected***	Pollutant	Source	Priority for Analysis	Schedule
<u>Streams/Rivers</u>						
1529 Little Beaver Creek	Phelps	0.1	NFR	Rolla SW WWTP	L	2005
1746 Big Bottom Creek	Ste. Genevieve	0.5	BOD, NFR	Lake Forest Subdivision	L	2003
2916 Big Creek	Iron	4	Metals	Lead smelter	H	2004
1224 Big Otter Creek	Henry/St. Clair	1	pH	Otter Creek coal area	(2)	2004
2074 Big River	Jefferson	53	Lead	Old Lead Belt tailings	H	2004
2080 Big River	St. Francis	40	Lead, sediment	Old Lead Belt tailings	H	2004
2755 W. Fk. Black River	Reynolds	0.2	Nutrients	W. Fork Mine	L	2003
0811 E. Brush Creek	Moniteau	1	BOD, NFR	California N.	L	2006
1370 Brush Creek	St. Clair	1	Inundation	Truman Dam	L	2007
1592 Brushy Creek	Texas	0.2	NFR	Houston STP	L	2005
0859 Brushy Fork	Pettis	1	BOD, NFR, NH ₃ N	Sedalia WWTP	L	1997
3269, 3273 Buffalo Creek	McDonald/Newton	9	Nutrients	Livestock production	M	2003
3118 Buffalo Ditch	Dunklin	3	BOD	Kennett WWTP	*(1)	2005
0709 Bynum Creek	Callaway	0.3	Sediment	Auxvasse Stone Quarry	L	2006
0103 Cannon Re-reg pool	Ralls	10	Iron	Cannon Dam releases	M	
			Manganese	Cannon Dam releases		
9000 Cave Spring Branch	McDonald	0.2	Nutrients	Nonpoint source/Simmons	M	2003
0737 Cedar Creek	Callaway	2	pH, sulfate	Upper Cedar Creek coal area	L	2000
		1	Sulfate	Upper Cedar Creek coal area	L	
		1	Sulfate	Manacle, Cross-Mitchell area	L	
3203 Center Creek	Jasper	11	Zinc	Historic mining activities	M	2005
0640 Chariton River	Chariton	29	Fecal Coliform	Unknown	M	
3168 Chat Creek (Douger Branch)	Lawrence	2	Zinc	Aurora mines area	L	2004
3238 Clear Creek	Newton	1	BOD, NFR, NH ₃ N	Monett WWTP	L	2011
3239 Clear Creek	Lawrence	2	BOD, NFR, NH ₃ N	Monett WWTP	L	1999
0690 Dark Creek	Randolph	8	Sulfate	Crutchfield coal area	L	2006
0912 Davis Creek	Lafayette	2	Low D.O.	Odessa SE WWTP	H	2000
0542 Dog Creek	Daviess	5	Sediment	Traeger Quarry	L	2005
1145 Dry Auglaize Creek	Laclede	1.5	BOD, NFR	Lebanon WWTP	L	2005
2604 Eleven Point River	Oregon	0.4	Chlorine	Willow Springs WWTP	L	2003
3246 Elk River	McDonald	21.5	Nutrients	Livestock production	M	2003
2168 Flat River Creek	St. Francis	4.5	Lead, sediment	National & Federal tailings piles	H	2004
Flat River Creek	St. Francis	5	Zinc	Elvins tailings pile	H	2004
2860 Goose Creek	Madison	0.5	Nickel	Madison mine artesian flow	L	1999
0883 Gabriel Creek	Morgan	0.8	BOD, NFR	Stover NW Lagoon	L	2005
1007 Hinkson Creek	Boone	11	Unspecified	Urban nonpoint lagoon runoff	M	2004
1251 Honey Creek	Henry	3	Sulfate	Reliant coal area	L	2006
2582 Howell Creek	Oregon	0.3	Chlorine	West Plains WWTP	L	2005
3256 Indian Creek	McDonald/Newton	26	Nutrients	Livestock production	M	2003
3259 S. Indian Creek	Newton	9	Nutrients	Livestock production	M	2003
3260 N. Indian Creek	Newton	5	Nutrients	Livestock production	M	2003
3262, 3263 M. Indian Cr.	Newton	5.5	Nutrients	Livestock production	M	2003

Water	County	Miles/Acres Affected***	Pollutant	Source	Priority for Analysis	Schedule
<u>Streams/Rivers (cont.)</u>						
2681 Jacks Fork River	Shannon	5	Fecal coliform	Organic wastes	H	2003
2347, 2362, 2365 James River	Greene/Stone	59	Nutrients, unknown	Urban nonpoint runoff	H	2000
1016 Kelley Branch	Boone	1	Habitat loss	ORV use Finger Lakes State Park	H	2002
1438 Little Lindley Creek	Dallas	1	BOD, NFR	Buffalo WWTP	L	
0427 E. Fk. Little Blue R.	Jackson	0.1	BOD, NFR	Independence MHP	L	2004
0535 Long Creek	Caldwell	0.2	Sediment	Everett #6 Quarry	L	2005
2814 Main Ditch	Butler	4	Low D.O.	Poplar Bluff WWTP	**(3)	2003
0742 Manacle Creek	Callaway	2	pH, sulfate	Manacle Creek coal area	L	2000
1308 Marmaton River	Vernon	49.5	Natural Background	Nonpoint Sources	L	TBD
2787 McKenzie Creek	Wayne	0.5	pH	Gads Hill Quarry	L	2003
1234 Monegaw Creek	St. Clair	3	Sulfate	Montee coal area	L	2006
0942 N. Moreau Creek	Moniteau	10	NFR	California S. WWTP	L	1999
1300 Mound Branch	Bates	1	Ammonia, BOD	Butler WWTP	H	2005
0856 L. Muddy Creek	Pettis	0.7	Temperature	Tyson's Foods, Inc.	L	2000
0855 Muddy Creek	Pettis	33	BOD	Sedalia WWTP	L	2001
1305 Mulberry Creek	Bates	8	Sulfate	Mulberry Creek coal area	L	2004
3652 Little Osage River	Vernon	16	Natural Background	Nonpoint Sources	L	TBD
1031 Osage River	Miller/Cole	0.4	Habitat loss	In-stream gravel dredging	H	2004
3268 Patterson Creek	McDonald	2	Nutrients	Livestock production	M	2003
2375 Pearson Creek	Greene	1.5	Unknown toxicity	Unknown	M	2003
2614 Piney Creek	Oregon	0.1	Chlorine	Alton STP	L	2005
1714 Rock Creek	Jefferson	2	BOD, Ammonia	2 WWTPs	H	1999
1014 Rocky Fork	Boone	0.5	Sediment	ORV use Finger Lakes State Park	H	2002
0278 Rush Cr.	Platte	4	BOD, NFR	Platte Co. Sewer District	L	1999
1381 L. Sac River	Polk	29	Fecal coliform	Springfield NW	L	2003
2859 Saline Creek	Madison	0.5	Nickel	Madison mine artesian flow	L	1999
2190 Saline Creek	Jefferson	2	BOD, NH ₃ N	Ron Rog STP	L	1998
0091 Salt River	Ralls	29	Manganese	Cannon Dam releases	M	TBD
			Iron	Cannon Dam releases	M	TBD
1319 Second Nicholson Creek	Barton	3	Sulfate	Several coal areas	L	2004
2170 Shaw Branch	St. Francis	2	Lead, sediment	Federal tailings (St. Joe State Park)	H	2006
2120 Shibboleth Creek	Washington	0.5	Sediment	Barite tailings pond	H	2008
3230 Shoal Creek	Barry	13.5	Fecal coliform	Unknown agricultural source(s)	M	2003
0400 W. Fk. Sni-a-Bar Cr.	Jackson	6	BOD, NFR	Lake Lotawana	L	2005
2835 St. Francis River	St. Francis	3	Ammonia, BOD	Farmington W. WWTP	H	1999
1361 Stockton Branch	Cedar	2	NFR	Stockton Lagoon	L	2006
0959 Straight Fork	Morgan	2	NFR	Versailles Lagoon	L	2005
3250 B. Sugar Creek	McDonald/Barry	35	Nutrients	Livestock production	M	2003
3249 L. Sugar Creek	McDonald	11	Nutrients	Livestock production	M	2003
0686 Sugar Creek	Randolph	1	pH	Huntsville Gob coal area	L	2001
		0.5	pH	Calfee Slope coal area	L	2001
1282 E. Fk. Tebo Creek	Henry	1	pH	Triple coal area	L	2004
1284 M. Fk. Tebo Creek	Henry	6.5	Sulfate	New Castle coal area	L	2001
1288 M. Fk. Tebo Creek	Henry	2	pH, sulfate	New Castle coal area	L	2001
		1.5	Sulfate	New Castle coal area		
1292 W. Fk. Tebo Creek	Henry	7	Sulfate	Spargler coal area	L	2004

Water	County	Miles/Acres Affected***	Pollutant	Source	Priority for Analysis	Schedule
<u>Streams/Rivers (cont.)</u>						
2850 Trace Creek	Madison	4.2	pH	Source unknown, possible acid deposition	L	2006
		1.3	pH	Source unknown, possible acid deposition and sawdust pile leachate	H	
1211 Trib. Barker=s Creek	Henry	0.3	pH	Grey coal area	L	2001
1225 Trib. Big Otter Creek	Henry/St. Clair	1	pH	Otter Creek coal area	(2)	2004
2128 Trib. Pond Creek	Washington	0.5	Sediment	Barite tailings pond	H	2008
3217 Turkey Creek	Jasper	5	Zinc	Duenweg mines area	L	2005
3216 Turkey Creek	Jasper	3.5	Zinc	Duenweg, Lone Elm and Leadville Hollow mines area	L	2005
3282 Turkey Creek	St. Francois	1.5	BOD, NFR	Bonne Terre	L	2005
3490 Tyson's Branch	Pettis	0.4	Temperature	Tyson's Foods, Inc.	L	2000
2864 Village Creek	Madison	0.5	Sediment	Mine la Motte tailings	H	2006
1505 Whetstone Creek	Wright	2	BOD	2 Mountain Grove WWTPs	H	2000
2375 Wilson Creek	Greene	14	Unknown toxicity	Unknown	M	2003
<u>Lakes</u>						
7119 Cameron Lake (Lower)	DeKalb	96	Atrazine	Corn, sorghum production	H	TBD
7120 Cameron Lake #1	DeKalb	25	Atrazine	Corn, sorghum production	H	TBD
7121 Cameron Lake #2	DeKalb	35	Atrazine	Corn, sorghum production	H	TBD
7237 Fellows Lake	Greene	820	Algae	Ag/urban nonpoint source	M	2004
7124 Hamilton	Caldwell	80	Cyanazine	Corn, sorghum production	M	TBD
7190 Higginsville S. Lake	Lafayette	223	Atrazine	Corn, sorghum production	M	TBD
7022 LaBelle Lake #1	Lewis	17	Atrazine	Corn, sorghum production	M	2003
7023 LaBelle Lake #2	Lewis	112	Atrazine	Corn, sorghum production	M	2003
7205 Lake of the Ozarks	Benton	50	Low D.O.	Truman Dam	M	2007
			Gas supersaturation	Truman Dam	M	
			Fish trauma	Truman Dam	M	
7314 Lake Taneycomo	Taney	1,730	Low D.O.	Table Rock Dam	M	2007
7356 Lamar Lake	Barton	180	Algae	Ag nonpoint source	M	2004
7033 Mark Twain Lake	Monroe	18,600	Atrazine	Corn, sorghum production	M	TBD
7236 McDaniel Lake	Greene	300	Algae	Ag/urban nonpoint source	M	2003
7031 Monroe City Route J Lake	Ralls	94	Atrazine	Corn, sorghum production	H	2003
			Cyanazine	Corn, sorghum production	H	2003
7187 Spring Fork Lake	Pettis	178	Algae	Ag nonpoint source	M	2004
7077 Smithville Lake	Clay	7,190	Atrazine	Corn, sorghum production	H	TBD
7032 Vandalia Lake	Audrain	37	Atrazine	Corn, sorghum production	M	2003

CATEGORY 2
RECOMMENDED SECTION 303(d) WATERS REQUIRED TO HAVE ADDITIONAL
MONITORING PRIOR TO TMDL DEVELOPMENT

Water	County	Miles/Acres Affected***	Pollutant	Source	Priority for Analysis	Schedule
<u>Streams/Rivers</u>						
1250 Big Cr.	Johnson	49	Sediment*	Ag nonpoint source	H	2009
0449 W. Fk. Big Cr.	Harrison	18	Sediment	Ag nonpoint source	L	2008
0436 Big Muddy Cr.	Daviess	8	Sediment *+	Ag nonpoint source	H	2008
0653 Blackbird Cr.	Adair	6	Sediment+	Ag nonpoint source	H	2005
0921 S. Fk. Blackwater	Johnson	5	Sediment*	Ag nonpoint source	H	2009
1336 Clear Cr.	Vernon	18	Sediment+	Ag nonpoint source	H	2005
0372 E. Fk. Crooked Cr.	Ray	14	Sediment	Ag nonpoint source	L	2008
1325 L. Drywood Cr.	Vernon	17	Sediment	Ag nonpoint source	L	2005
0189 Elkhorn Cr.	Montgomery	19	Sediment	Ag nonpoint source	L	2009
0056 N. Fabius R.	Marion	82	Sediment, Manganese	Ag nonpoint source	L	2007
0865 Flat Cr.	Pettis	20	Sediment+	Ag nonpoint source	H	2006
0502 Grindstone Cr.	DeKalb	16	Sediment	Ag nonpoint source	L	2009
0457 E. Fk. Grand R.	Gentry	25	Sediment	Ag nonpoint source	L	2008
0468 M. Fk. Grand R.	Gentry	25	Sediment+	Ag nonpoint source	H	2006
0337 Honey Cr.	Nodaway	8.5	Sediment	Ag nonpoint source	L	2009
0554 Honey Cr.	Livingston	23	Sediment	Ag nonpoint source	L	2009
0212 Indian Camp Cr.	Warren	0.3	Ammonia, Sediment	JZ Landfill	H	2005
0606 Locust Cr.	Chariton	84	Sediment	Ag nonpoint source	L	2009
0612 W. Fk. Locust Cr.	Linn	17	Sediment+	Ag nonpoint source	H	2009
0339 Long Branch	Nodaway	6	Sediment	Ag nonpoint source	L	2009
0875 Lake Cr.	Pettis	15	Sediment	Ag nonpoint source	L	2009
3106 Lat.#2 Main Ditch	Stoddard	11.5	Sediment *	Ag nonpoint source	H	2009
0508 Marrowbone Cr.	Daviess	11	Sediment	Ag nonpoint source	L	2009
0619 E. Fk. Medicine Cr.	Sullivan	36	Sediment *+	Ag nonpoint source	H	2005
0623 L. Medicine Cr.	Mercer	40	Sediment *+	Ag nonpoint source	H	2005
1299 Miami Cr.	Bates	18	Sediment	Ag nonpoint source	L	2005
2124 Mill Creek	Lincoln	4	Sediment	Ag nonpoint source	L	2009
Mississippi River	All	entire length	Habitat loss	Channelization	M	2005
Missouri River	All	entire length	Habitat loss	Channelization	M	2005
0345 White Cloud Cr.	Andrew	11	Sediment	Ag nonpoint source	L	2009
0674 Mussel Fork	Sullivan	29	Sediment+	Ag nonpoint source	H	2004
1175 W. Fk. Niangua R.	Webster	0.5	BOD,NFR	Marshfield WWTP	H	TBD
0081 North R.	Marion	40	Sediment	Ag nonpoint source	M	2009
3041 Old Ch. Little R.	Scott	20	Sediment *	Ag nonpoint source	H	2009
1444 Piper Cr.	Polk	0.5	NFR	Bolivar WWTP	H	2005
0327 3rd Fk. Platte R.	DeKalb	31.5	Sediment	Ag nonpoint source	L	2009
0121 M. Fk. Salt R.	Monroe	49	Sediment	Ag nonpoint source	L	2009
3134 Spillway Ditch	Mississippi	13.5	Sediment*	Ag nonpoint source	H	2009
0657 Spring Cr.	Adair	18	Sediment+	Ag nonpoint source	H	2003
1870 Spring Cr.	Dent	0.3	BOD, NFR	Salem WWTP	H	2005
3188 N. Fk. Spring R.	Barton	51.5	Sediment	Ag nonpoint source	L	2005
0710 Stinson Cr.	Callaway	0.5	BOD, Ammonia	Fulton WWTP	H	2003
0248 L. Tarkio Cr.	Atchison	17.5	Sediment+	Ag nonpoint source	H	2009

Water	County	Miles/Acres Affected***	Pollutant	Source	Priority for Analysis	Schedule
<u>Streams/Rivers (cont.)</u>						
0073 Troublesome Cr.	Lewis	3.5	Sediment+	Ag nonpoint source	H	2008
1339 Walnut Cr.	Cedar	1.0	BOD,NFR	El Dorado Spgs. WWTP	H	2005
0050 S. Wyaconda R.	Clark	9.0	Sediment+	Ag nonpoint source	H	2008

Lakes

7171 Long Branch Lake	Macon	2430	Cyanazine	Corn, sorghum production	H	2005
7009 Wyaconda Lake	Clark	8	Atrazine	Corn, sorghum production	H	2004

* stream has significant amounts of channelization

+ large Concentrated Animal Feeding Operations in this watershed

CATEGORY 3 RECOMMENDED SECTION 303(d) WATERS REQUIRED TO HAVE USE ATTAINABILITY ANALYSES OR TMDL DEVELOPMENT

Water	County	Miles/Acres Affected***	Pollutant	Source	Priority for Analysis	Schedule
<u>Streams/Rivers</u>						
0417 Blue River	Jackson	4	Chlordane	Urban nonpoint sources	L	2003
0418 Blue River	Jackson	9	Chlordane	Urban nonpoint sources	L	2003
0419 Blue River	Jackson	9	Chlordane	Urban nonpoint sources	L	2003
0421 Blue River	Jackson	2	Chlordane	Urban nonpoint sources	L	2003
0037 Fox River	Clark	12	Manganese	Natural	L	2007
0046 Wyaconda River	Lewis	8	Manganese	Natural	L	2007
0063 M. Fabius River	Lewis	57	Manganese	Natural	L	2007

Lakes

7255 Creve Coeur Lake	St. Louis	300	Chlordane	Urban nonpoint runoff	L	2003
7054 Lake St. Louis	St. Charles	525	Chlordane	Urban nonpoint runoff	L	2003
7211 Pleasant Hill Lake	Cass	115	Chlordane	Urban nonpoint runoff	L	2003
7207 Truman Lake	Bates-Benton	55,600	Manganese	Natural	L	2005

Notes:

* Pending Use Attainability Study (U.A.S.).

** Use Attainability Study completed.

*** Units are in miles for streams and surface acres for lakes.

(1) To be proposed for site specific criteria for D.O. based on U.A.S. at Poplar Bluff.

(2) Reclamation project in progress. Post-reclamation water quality & 303(d) status to be determined.

(3) U.A.S. Conducted by MO DNR in 1992.

Abbreviations:

AML	Abandoned mined land	Pb	Lead
BOD	Biological oxygen demand	pH	Acidic conditions
Co	Cobalt	STP	Sewage Treatment Plant
D.O.	Dissolved oxygen	TBD	To be determined
NFR	Non-filterable residue	TDS	Total dissolved solids
NH ₃	Ammonia	WWTP	Wastewater treatment plant
Ni	Nickel	Zn	Zinc
NPS	Nonpoint source		

SECTION 303(d) WATERS

STATE OF MISSOURI

April 17, 1999

The following waters were added to the Missouri 1998 Section 303(d) list of waters by the U.S. Environmental Protection Agency.

Water	County	Miles/Acres Affected***	Pollutant	Source	Priority for Analysis	Schedule
<u>Streams/Rivers</u>						
640 Chariton River	Chariton	29	Fecal Coliform	Unknown	M	TBD
856 Little Muddy Creek	Pettis	0.7	Temperature	Tyson=s Foods, Inc.	L	TBD
3490 Tyson=s Branch	Pettis	0.4	Temperature	Tyson=s Foods, Inc	L	TBD
3652 Little Osage River	Vernon	16	Natural Background	Nonpoint sources	L	TBD
1308 Marmaton River	Vernon	49.5	Natural Background	Nonpoint sources	L	TBD